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Unintended Fertility and the Stability of Coresidential Relationships

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Abstract

Having an unintended birth is associated with maternal and child health outcomes, the mother-child relationship, and subsequent fertility. Unintended fertility likely also increases the risk of union dissolution for parents, but it is unclear whether this association derives from a causal effect or selection processes and whether it differs by union type. This article uses data from the 2002 National Survey of Family Growth to compare union stability after intended and unintended births in coresidential relationships. Results show that coresidential couples are more likely to break up after an unintended first or higher-order birth than after an intended first or higher-order birth, even when accounting for stable unobserved characteristics using fixed-effects models. The negative association is stronger for marriages than cohabitations, despite the overall higher dissolution rate of cohabiting unions. We conclude that unintended fertility at any parity is disruptive for coresidential couples in ways that increase the risk of union dissolution.

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More than one third of births between 1997 and 2002 in the United States were unintended, including 23% of births to married women and 51% of births to cohabiting women (Chandra et al. 2005). Unintended birth rates in the U.S. are higher than in other developed countries and have been stable and perhaps even increasing in the 1990s after showing declines in earlier decades (Finer and Henshaw 2006; Morgan 2003). Unintended fertility, especially unwanted fertility, is associated with negative health consequences for both mothers and children (Bustan and Coker 1994; Hellerstedt et al. 1998; Hummer et al. 1995; Joyce, Kaestner, and Korenman 2000; Marsiglio and Mott 1988; Weller, Eberstein, and Bailey 1987). Having a child much earlier than desired or when one does not want to have children at all can also influence later family and relationship behaviors and outcomes. For instance, unintended births are associated with less positive mother-child relationships (Barber, Axinn, and Thornton 1999; Nelson and O'Brien forthcoming), and women with early unintended births are more likely to have subsequent unintended births (Guzzo and Hayford 2011). There is also some evidence that unintended first births are negatively associated with union stability (Logan, Holcombe, Manlove, and Ryan 2007; Manning, Smock, and Majumdar 2004; National Campaign 2008; Wu and Musick 2008). However, variation in the effects of unintended births on union dissolution by parity or union type have not been studied. Moreover, the roles of causal mechanisms and selection processes in the association between unintended births and subsequent union stability have not been explored.

This analysis fills a gap in the empirical literature by comparing relationship outcomes after first and higher-order intended and unintended births in coresidential unions, disaggregating models by union type at first birth, and using fixed-effects models to assess the impact of stable unobserved individual and couple characteristics, using data from the 2002 National Survey of

Family Growth (NSFG). We investigate the role of selection into unintended fertility in explaining the association between intendedness and union stability found in previous research.

Fertility, intentionality, and union dissolution

Three decades of research has shown that children are associated with greater marital stability (Cherlin 1977; Heaton 1990; Lillard and Waite 1993; Morgan and Rindfuss 1985; Waite, Haggstrom, and Kanouse 1985; Waite and Lillard 1991). Evidence from the U.S., Britain, and Canada suggests that cohabiting parents also have lower dissolution rates than cohabitors without children, although this association is less consistent than for married couples (Manning 2004; Steele et al. 2005; Wu 1995). Children are hypothesized to increase stability by increasing commitment to the relationship, by increasing relationship-specific investment, and by increasing the normative pressures against dissolution (Becker 1981; Coleman 1988; Friedman, Hechter, and Kanazawa 1994; Thornton 1977). Some of the positive association between fertility and marital stability can also be attributed to selection, since less stable couples are likely to avoid childbearing, and relationship quality influences fertility behaviors (Lawrence et al. 2008; Rijken and Thomson 2011). However, the stabilizing effect of childbearing has been found to persist even when selection is accounted for (Lillard and Waite 1993).

The earlier literature on children and coresidential relationship outcomes does not consider possible differences in the impact of intended and unintended fertility on relationship dissolution, yet unintended births are likely to be far more disruptive than intended births and far less likely to represent commitment. The limited research comparing the stability of marriage and cohabiting unions for children finds that relationships are more likely to dissolve after unintended first births than intended first births (Manning, Smock, and Majumdar 2004; Wu and Musick 2008). In addition, couples who have an unintended birth are more likely to transition

out of a union in the two years following the birth than couples who have an intended birth (National Campaign 2008).

There is likely to be a direct negative effect of unintended fertility on the stability of coresidential unions. Early childhood tends to be a stressful time for parents, with high physical demands of caring for a child, increased financial pressures, and decreases in leisure time (including time spent on relationship-building). The impact of these increased demands may be larger for couples who did not plan to have children together. Relationship quality generally declines after a birth (Belsky and Rovine 1990; Doss et al. 2009), and the decline is most sizeable among those with unintended fertility (Cox et al. 1999; Lawrence et al. 2008). Qualitative research reports mixed feelings among women – unplanned pregnancies may increase commitment (Kendall et al. 2005), but they also introduce stress into a relationship (Lifflander et al. 2007). Even women who feel closer to their partners during an unintended pregnancy may experience increased conflict after the baby is born (Kendall et al. 2005). Although there is evidence that birth planning status affects marital stability as well as satisfaction (Cowan and Cowan 2000), most studies examining union stability and the transition to parenthood have focused on marriages, and intentionality has either been ignored or measured inconsistently (e.g., Doss et al. 2009; Lawrence et al 2008; Twenge, Campbell, and Foster 2003).

Couple disagreement on birth intentionality, which is fairly common (Williams 1994; Korenman, Kaestner, and Joyce 2002) but has not been explored in prior work, may also impact coresidential union dissolution. During the period 1997-2001, an estimated 22% of mothers – including 29% of those cohabiting and 18% of those married at the time of the birth – reported that they and the baby's father did not agree on whether the birth was intended or they did not know the father's feelings toward the birth (Chandra et al. 2005). In terms of union stability,

couples who disagree on intentionality likely fall somewhere between couples who agree the birth was intended and couples who agree the birth was unintended. When at least one partner intended the birth, that person may feel prepared to take on the roles and duties of parenthood and can ease the burden for the other partner by helping them adjust and cope. Still, the other partner is likely to be displeased, and there is sometimes distrust between partners, where one partner feels "trapped" by the birth (Edin and Kefalas 2005). Thus, we hypothesize that an elevated risk of instability persists when even only one partner feels a birth was unintended.

As noted by Lawrence et al. (2008), higher-parity births may have an independent and separate impact on relationship quality and stability, yet few studies distinguish between the transition to parenthood and having additional children. Certainly, births beyond the first may impact stability, with multiple unintended births likely to be particularly disruptive and stressful; a growing body of evidence suggests that women with early unintended births are at increased risk of having subsequent unintended births as well (Guzzo and Hayford 2011; Wildsmith, Guzzo, and Hayford 2010). Having another child quickly after the first child may overwhelm a couple, especially for those whose first child was unintended, even if they ultimately wanted to have more children in the future. Having an unplanned child several years after a couple has completed their desired family size may be equally disruptive. To our knowledge, no empirical research assesses how the sequencing of intended and unintended births is associated with union stability, though Nelson and O'Brien (forthcoming) find that mothers with unplanned higher-parity births had higher levels of early parenting stress than first-time mothers with an unplanned birth.

Although we expect that unintended fertility is negatively associated with union stability for all relationships, it is likely to be more strongly associated with the stability of cohabiting

unions than marital unions. Compared to married couples, cohabiting couples tend to report lower levels of relationship quality and commitment and have lower expectations about the permanency of their union (Brown and Booth 1996; Nock 1995; Smock 2000). Further, although marriage is undeniably undergoing major changes (Cherlin 2004), cohabitation remains far less institutionalized than marriage (Thornton, Axinn, and Xie 2007), with roles, obligations, and social norms less clearly defined. Relative to married individuals, cohabitors report lower levels of social well-being and integration (Shapiro and Keyes 2008), which may impact their ability to withstand some of the stressors that may accompany a mistimed or unwanted birth. Overall, higher levels of commitment to their union and their partners, combined with greater social support, likely enhance the ability of married couples to handle any issues that may arise from an unintended birth.

In addition to causal mechanisms, selection processes into intended and unintended fertility are likely associated with relationship outcomes. That is, the factors that determine whether couples have intended or unintended births may also be related to whether relationships dissolve. Most directly, perceived relationship stability or quality may influence couples' decision-making around childbearing. Evidence from the Netherlands shows that fertility rates are highest in couples with midlevel relationship quality, with both the highest quality and lowest quality relationships having lower birth rates (Rijken and Thomson 2010). Limited research has examined associations between relationship quality and birth intendedness, but one study in the United States found that couples with planned pregnancies had higher relationship quality before the birth than couples with unplanned pregnancies (Lawrence et al. 2008). Certainly, unintended births do not serve as a sign of long-term commitment and confidence in the same way that deliberately planned births do. Further, given the existence of pronatalist norms (weakened but

nonetheless still present) in the United States (Barber and Axinn 2005; Hagewan and Morgan 2005; McQuillan et al. 2008), couples who choose not to have a child together likely represent a distinctive subset of couples, and may hold other attitudes toward family life that increase their risk of union instability, such as greater acceptance of divorce. Stable personality characteristics, such as self-efficacy and impulsiveness, may predict both unintended fertility and union instability (Raffaelli and Crockett 2003). Other psychological aspects likely influence unintended fertility and union stability as well. For instance, couples who are effective communicators may be able to both prevent unintended fertility and maintain a stable relationship.

These characteristics are difficult, if not impossible, to measure in survey data, and most previous research fails to include them in models. However, their omission may lead to overestimation of the effects of unintended fertility if the characteristics and proclivities that increase the risk of a couple having an unintended birth are the same as those that increase the risk of union dissolution. To account for these factors, we apply fixed-effects models for discrete-time data to account for stable observed and unobserved characteristics of individuals and couples (Teachman 2011). Fixed-effects models control for unchanging ("fixed") factors, such as pre-birth relationship quality, psychological characteristics, and couple-level interaction, that may be related to both the independent variables of interest and the dependent variable – here, the risk of having an unintended birth and the risk of experiencing union dissolution.

Hypotheses

We hypothesize that unintended fertility increases the risk of instability due to the disruptive nature of an unintended birth. This causal argument suggests that the risk would be greatest for first unintended births, especially among those with multiple unintended births, but

would also exist for a higher-parity unintended birth following an intended birth. To a lesser extent, disagreement would also increase the risk of instability relative to an intended birth.

Hypothesis 1: Unintended births, and to a lesser extent, disagreed-upon births increase the risk of coresidential union instability relative to intended births, for both first and higher-parity births independently.

We expect that there are differences between cohabiting and marital unions in the association between unintended fertility and union dissolution. Because marital unions tend to involve more committed individuals, are more institutionalized, and have more sources of social support than cohabiting unions, we expect marital unions are better equipped to buffer the negative impact of an unintended birth.

Hypothesis 2: The negative association between an unintended and disagreed-upon fertility and subsequent stability will be greater for cohabiting unions than marital unions.

It is also possible that unintended fertility is associated with a higher risk of instability only because of selection and unobserved heterogeneity. That is, the same underlying factors may produce both a higher risk of unintended and disagreed-upon fertility *and* a higher risk of union dissolution. According to this viewpoint, accounting for selection into who has an unintended or disagreed-upon birth would fully explain the association between unintendedness and instability. (A weaker version of this hypothesis would propose that accounting for selection will attenuate but not fully explain the association between unintended fertility and relationship dissolution.)

Hypothesis 2: Unintended and disagreed-upon births are unrelated to union stability in fixed effects models that account for selection on stable unobserved characteristics.

Data and methods

Data

We use the 2002 cycle of the National Survey of Family Growth (NSFG), a nationally representative cross-sectional survey of U.S. women and men aged 15-44 designed to measure levels and trends in fertility. The NSFG includes detailed birth and relationship histories, as well as measures of sociodemographic characteristics and family background. We restrict our analysis to the female sample (n=7,639) because the NSFG did not measure intentionality in the same manner for women and men; men were asked a different set of intentionality questions and only for births in the five years preceding the survey. The NSFG does not include relationship information for noncoresidential births, so our analysis is restricted to the 2,649 mothers (of 4,409 mothers in the NSFG) who were either cohabiting or married at their first birth. Our analysis is thus not representative of all unintended births. In particular, results are not generalizable to the 70% of nonmarital first births to women aged 15-44 in 2002 that took place to women who were not cohabiting. However, the majority of births (both intended and unintended) take place in coresidential relationships – 60% of all births in the NSFG occur in cohabiting or marital unions (Chandra et al. 2005) – and our analysis does describe these births.

We further restrict the sample to women with valid information on the key independent variables of first and higher-order birth intendedness (n=2,546). To avoid any confounding influence of stepchildren on union dissolution, we excluded cases where the partner already had a child from a prior union to produce a sample where both the respondent and her partner were

having their first birth together (n=2,137). We also excluded 111 women in the "other" race group, as this group is racially/ethnically diverse and as such it is difficult to interpret coefficients, giving us a sample size of 2,026. Finally, due to an error in the data collection process while in the field, a small number of cases were missing information on the end date of marriage, and we excluded these cases for a final sample size of 1,954 (430 women cohabiting at first birth and 1524 women married at first birth).[1] Thus, our analysis is generalizable to non-Hispanic white, non-Hispanic black, and Hispanic women who had their first child in a coresidential union and whose partner did not have any children from a prior relationship.

The NSFG is the primary national source of information on birth intendedness, having included questions regarding the intendedness of births since its inception in 1973 (London, Peterson, and Piccinino 1995; Ventura et al. 2008). The NSFG does not directly inquire whether a birth was intended or wanted. Instead, wantedness and intendedness are constructs based on responses to a series of questions asked for every birth. Wantedness is derived from the question "Right before you became pregnant, did you yourself want to have a(nother) baby at any time in the future?" A negative answer would be characterized as an unwanted birth. If a woman responded affirmatively, she was asked about the timing of the pregnancy: "So would you say you became pregnant too soon, at about the right time, or later than you wanted?" Births that are identified as too late or at about the right time are considered wanted and intended. For births that are identified as occurring too soon, women are asked a follow-up question regarding the extent to which the births were too soon: "How much sooner than you wanted did you become pregnant?" Recent research has shown that births mistimed by two or more years ("seriously mistimed") tend to have negative outcomes similar to those associated with unwanted births,

[1] The NSFG imputed end dates for these cases. We tested models including the imputed data and found similar results to those presented here, but the consensus among users of the NSFG is that these cases should be excluded.

whereas those that are mistimed by less than two years more closely resemble intended births (Abma, Mosher, and Jones 2008; Chandra et al. 2005; Lindberg, Finer, and Stokes-Prindle 2008; Pulley, Klerman, Tang, and Baker 2002). Building off this work, we consider births occurring two or more years too soon as seriously mistimed and thus unintended, while those occurring less than two years too soon are considered slightly mistimed and thus intended. Analyses using the more traditional measure of intendedness, where all mistimed births are grouped with unwanted, yielded substantively similar results.

Women were also asked about their partner's view of birth intendedness, using similar questions. They were asked "Right before you became pregnant, did the father want you to have a(nother) baby at any time in the future?" and if they responded affirmatively, they were asked "So would you say you became pregnant sooner than he wanted, at about the right time, or later than he wanted?" Births that the respondent reported her partner considered too late or at the right time are considered intended. Births the respondent reported her partner considered too soon or didn't care about the timing and those for which she was unsure of what her partner considered are characterized as unintended.

Discrete-time event history models

Our first approach is to use a standard technique to model union dissolution. We use discrete-time event history models to examine how the intendedness of a first birth occurring in a coresidential union and any subsequent fertility is related to the stability of the first-birth union. All analyses use person-months as the unit of analysis; women enter the sample the month of the first birth and leave when they experience relationship dissolution or are censored at the time of the survey if their relationship is still intact. The dependent variable is a dichotomous measure indicating whether the union is intact or not; analyses use logistic regression. Changes in

relationship status (i.e. the marriage of cohabiting couples) are modeled in the analysis (see below) but not treated as outcomes; we focus on the duration of relationships, regardless of the legal status of the couple (cf. Manning 2004). We run models both for a combined sample and by relationship status at birth (cohabiting or married).

We analyze birth intendedness and union dissolution in four event history models, for the combined sample and the two samples disaggregated by first birth union type. Model 1 is an unconditional model with only first birth intendedness and an indicator of duration since birth. Model 2 adds demographic and relationship controls (discussed below). Model 3 is an unconditional model including both first birth and subsequent birth intentionality, along with duration since first birth. Model 4 adds demographic and relationship controls to Model 3. By running both unconditional and full models, we are able to determine any net association between intendedness and stability as well as whether associations are mediated by observable socioeconomic, demographic, and union characteristics. We run models separately by union type at birth to examine whether the association between intendedness and union dissolution is similar across union types, while the combined model allows us to see the independent association of union type on union dissolution.

For first births, intentionality is defined as both partners agree the birth was intended (omitted), both partners agree it was unintended, and partner disagreement on intendedness. We explored whether it mattered which partner reported the birth as unintended, but these differences were not statistically significant, so we do not include them in the models presented here. We add time-varying and mutually exclusive measures of subsequent fertility and the intentionality of these births: no birth, only intended subsequent births for which both partners agree (omitted), only unintended subsequent births for which both partners agree, only

subsequent births for which there is partner disagreement, and subsequent births with different intentionalities (that is, having more than one subsequent birth and having different types of intentionality for these births).

We include a range of socioeconomic, demographic, and union covariates that are associated with both union dissolution and birth intendedness: race/ethnicity and nativity (non-Hispanic white, non-Hispanic black, foreign-born Hispanic, and native-born Hispanic), and a time-varying measure of education (high school degree/GED vs. no degree). Because the 2002 cycle of the NSFG did not include a detailed education or employment history as in other cycles, we have limited measures of socioeconomic status. We use measures of family background to proxy socioeconomic status. These include the respondent's mother's level of education and whether the mother had a child prior to age 18 as well as family structure at age 14 (intact, stepfamily, or other).

Past union information includes whether the respondent had ever been married or cohabited before as well as whether her partner had ever been married before (partner cohabitation history was not asked). Current relationship type is measured in the combined model through a time-varying variable indicating relationship status at birth and during the month: cohabiting at birth and cohabiting now, cohabiting at birth and married now, cohabited prior to marriage but married at birth and married now, and married at birth and married now (omitted); this variable is time-varying only for the cohabiting women who can move from cohabitation to marriage. For the cohabiting at birth sample, the categories are cohabiting at birth and cohabiting now relative to cohabiting at birth and married now (omitted). For the married women, the categories are premarital cohabitation relative to no premarital cohabitation (omitted). We also include a variable measuring the duration of the coresidential relationship

prior to birth. Duration since last birth is specified as a piecewise, time-varying linear spline (less than 24 months, 24-48 months, and more than 48 months) because of the discontinuities between duration since last birth, subsequent fertility, and union dissolution. We also include a control for year of birth to account for possible change over time in the underlying risks of union dissolution. Other fertility-related variables include the woman's age at birth and whether the birth was conceived prior to the coresidential union (defined as whether the birth occurred within 7 months of when the couple began living together).

Fixed-effects models

To account for stable characteristics of individuals and couples that may affect both independent and dependent variables, we estimate fixed-effects models for repeatable events (Teachman 2011). Fixed-effects models include a person-specific variable, with a unique value for each person (or, in this case, couple), that incorporates all unchanging characteristics that might be associated with the outcome variable. In order to estimate this model, multiple observations per person are necessary. Essentially, comparisons are made across observations for each person, and the person-specific variable drops out of the model. In this case, we take advantage of the fact that most women (about two thirds in this sample) experience more than one birth in a relationship to estimate the fixed-effects model, treating the interval after each birth as a separate observation. We use the same person-month data set as applied for our discrete-time event history models, with women entering the sample at the time of the first birth and leaving at relationship end or being censored at the date of the survey. Because of the difference in modeling, though, some of the control variables are defined slightly differently. Union status is defined simply as cohabiting or married during the month, and we include a control for how long the relationship had been intact at the most recent birth. The structure of

fixed-effects modeling also prohibits including measures for first and higher-order births in the same model, since births are modeled as separate events nested within a woman. We control for whether the birth was a first birth or a higher-parity birth.

One disadvantage of the fixed-effects model is that at least two observations with differing values for independent variables are necessary to estimate the model. Thus, only women who experienced more than one birth, with differing intentionalities, are used to estimate the coefficients for birth intentionality (N=134 for unintended births and N=476 for disagreed-upon births); the small sample sizes precluded disaggregating the model by union type. The coefficient for an unintended birth can be interpreted as the difference in the odds of relationship dissolution compared across intended and unintended births in the same relationship, averaged across individuals. Furthermore, the effects of stable characteristics such as race, family background, and whether the couple cohabited before marriage cannot be estimated, although they are controlled for in the model. In addition, fixed-effects models produce biased coefficient estimates for characteristics that vary monotonically with time, such as age and relationship duration (Allison 2005; Teachman 2011). Finally, fixed-effects models only control for time-invariant characteristics. They do not account for time-varying unobserved characteristics that might confound results – for example, a disturbance in the relationship that causes both unintended fertility and relationship dissolution. Still, because they account for pre-birth relationship quality and stable psychological characteristics, fixed-effects models provide a more robust estimation of associations between unintended fertility and relationship outcomes. In this analysis, where our primary focus is on the effect of birth intendedness, the ability to reduce bias in the estimate of these effects is worth the loss of efficiency and ability to estimate coefficients for fixed characteristics.

Results

Descriptive results

Table 1 shows weighted descriptive statistics for the analytic sample. Looking first at socioeconomic and demographic characteristics, the sample is largely non-Hispanic white, especially among the sample of marital first births; minorities, particularly non-Hispanic blacks, are under-represented due to the sample restriction that the first birth occur within a cohabiting or marital union. Just over three-fourths of the women lived with both biological parents at age 14, with substantially higher proportions of women in the marital birth sample having lived with both parents than in the cohabiting births sample. About 30% of women reported that their mother's education was high school or less, about 40% reported that their mother had a high school degree, and about 30% reported that their mother had some college or higher. Among the combined sample, 79% of the women themselves had a high school degree at the time of their first birth. Women in the marital first birth sample were more educationally advantaged than women in the cohabiting first birth sample, as indicated by both their mother's and their own education status.

– Table 1 here –

Turning now to relationship characteristics and history, 7% of women had cohabited with a different partner and 3% had been married to a different partner prior to their first-birth union. 7% were partnered with men who had been married before. More women who were cohabiting at their first birth had cohabited in the past and had a partner who had been previously married, while more women who were married at their first birth had themselves been married before. The majority of women in the sample (83%) were married at the time of birth, with 56% having not cohabited with their partner prior to marriage and 27% married at birth but having cohabited

prior to marriage with their partner. On average, the couples had been together in a coresidential relationship just under 3 years prior to their first birth; as would be expected, those with a cohabiting first birth had been together a shorter time period (about 21 months) than those with a marital first birth (about 37 months). There were about 8 years of observation on average (not shown) between the first birth and the relationship's end or time of the survey. By the end of the period of observation, about a third of the relationships had dissolved. This varied by the type of relationship at birth, with two-thirds of cohabiting relationships dissolving compared to only a quarter of marital relationships.

Finally, looking at the fertility characteristics, women were on average 24 years old at first birth, with married mothers being about 3 ½ years older (25 years) than cohabiting mothers (21.4 years). About one-fifth had conceived their child prior to the start of coresidence (e.g., their first birth occurred 7 months or less after the start of coresidence), but this was more likely to be the case for cohabiting births (33%) than marital births (19%). In light of the relatively long average duration of relationships at the time of birth, this suggests that our sample has substantial variability in relationship status and strength prior to first births – some couples were coresiding in response to a pregnancy, while others (primarily married couples) had been together for a long time. Two-thirds of women reported that both she and her partner had intended their first birth (40% among cohabiting women and 72% among married women), while 7% reported that both she and her partner did not intend to get pregnant with their first child (22% among cohabiting women and 5% among married women). The remaining one-fourth of the women reported disagreement between themselves and their partner on whether the birth was intended or not (38% among cohabiting women and 24% among married women). By the end of the period of observation, about 63% of women had had a subsequent birth in the same union as their first

birth (of the women without a second birth in the same union, 45% of relationships had dissolved and 55% were censored at the time of survey, not shown). 43% of women reported only intended subsequent births, 2% reported only unintended subsequent births, 10% reported only subsequent births where she and her partner disagreed upon their intentionality, and 8% had a combination of different types of births – intended, unintended, and/or disagreed-upon births. Having intended subsequent births only was more common among those with a marital first birth (46%) than those with a cohabiting first birth (30%), whereas more cohabitors reported not having any subsequent births (50%) than married women (34%) by the end of the period of observation.

Discrete-time event history results

Couples with unintended births are likely to have other characteristics associated with instability. We turn to multivariate event history models to account for some of these correlated characteristics. Table 2 details the results from the logistic regression of socioeconomic, demographic, relationship, and fertility variables on the stability of women's coresidential unions (combining cohabitation and marriage). Results are presented in the form of odds ratios. As the dependent variable measures whether the relationship dissolved or not, a number less than one indicates a decreased risk of dissolution and a number greater than one indicates an increased risk of dissolution in a given person-month.

– Table 2 here –

Model 1 shows the unconditional association of first birth intentionality with union dissolution for all women with a coresidential (cohabiting or marital) first birth, controlling for relationship duration after the first birth to account for independent exposure risk. As hypothesized, an unintended or disagreed-upon birth increases the likelihood of union dissolution. A birth that is considered unintended by both partners increases the odds of

dissolution fivefold relative to an intended birth, while disagreement doubles the odds. Union dissolution is significantly more likely after an unintended birth (by 32%) than after a disagreed-upon birth as well (not shown). The likelihood of dissolution is elevated in the two years following a birth (OR=1.28) but subsequently declines over time. Model 2 adds in socioeconomic, demographic, and union characteristics. Although the elevated chances of dissolution seen in Model 1 are sharply attenuated by controlling for other characteristics – indicating that selection on observable characteristics (particularly union type) explains much of the higher likelihood of dissolution after an unintended birth – first birth intentionality is nonetheless an important predictor of dissolution. Compared to women who reported that they and their partner intended their first birth, having an unintended first birth or disagreeing with their partner about birth intentionality is associated with a significantly higher odds of dissolution, even in the presence of socioeconomic, demographic, and relationship controls. When the respondent reported that both she and her partner did not intend the birth, the odds of dissolution are about 81% higher than if the birth was intended. Among couples with disagreement on intentionality (meaning at least one person considered the birth intended), the odds of dissolution are significantly higher than among couples in which the first birth was intended, by about 30%. Significance tests (not shown) demonstrated that the difference in the likelihood of dissolution between unintended births and disagreed-upon births is also statistically significant, with the odds of dissolution being about 40% higher if the birth was unintended by both partners than if it at least one partner reported the birth was intended, as expected in Hypothesis 1.

Relationship type is the strongest predictor of subsequent union stability among parents, even more so than intentionality. Women who were cohabiting at birth (regardless of whether

they had subsequently married or not) have odds of dissolution about four times higher than women who were married at birth and had not cohabited prior to marriage. Women who cohabited prior to marriage but had a marital birth also have an elevated risk of dissolution compared to women who had a marital first birth and did not cohabit prior to marriage. Women who had prior cohabitations or marriages had elevated odds of dissolution (OR=1.42 and OR=1.62, respectively).

Generally, other socioeconomic and demographic characteristics are not associated with union dissolution, though the risk of dissolution was lower for foreign-born Hispanic women relative to non-Hispanic white women (OR=0.72). The lack of significant socioeconomic and demographic predictors of dissolution seems surprising given previous findings of variation in union stability. This result occurs primarily because socioeconomic and demographic characteristics are strongly related to first birth circumstances (particularly intentionality and union status at first birth), so limiting our sample to coresidential first births and controlling for circumstances at the time of birth accounts for most variation in stability. Finally, it is worth noting that the odds of dissolution decrease with union duration, are inversely related to the woman's age at birth, and increase for women who had their first births in more recent years.

Model 3 adds information on subsequent fertility and intentionality to the first birth measures in Model 1 (the unconditional model). Two things are of note here. First, adding measures of subsequent fertility improves model fit, indicating that subsequent fertility and intentionality is an important independent predictor of union stability. In particular, relative to women who have only intended subsequent births (the modal category), women who do not have a second birth are about 71% more likely to experience relationship dissolution. (Of course, couples who break up are no longer at risk for a second birth together. Because measures of

fertility are time-varying, and models account for time elapsed since the first birth, our models capture effects of fertility on dissolution and not the reverse causal direction.) Women with only unintended subsequent births are 2.77 times as likely to experience dissolution than women with only intended births, and women with disagreed-upon births are 1.62 times as likely to experience dissolution, net of first birth intentionality. Second, the association between the odds of dissolution and first birth intentionality remains large and significant, with the odds of dissolution 3 times as high for an unintended first birth relative to an intended first birth and about 1.6 times as high for a disagreed-upon first birth, even controlling for subsequent fertility.

Model 4 adds socioeconomic and demographic characteristics. The effects of the socioeconomic, demographic, and union formation variables change little compared to Model 2. As such, we again focus our discussion of results on fertility intentionality. The magnitude of the association between first birth intentionality and union dissolution is only minimally attenuated when adding indicators of higher-order fertility to other controls (Model 4 vs. Model 2). Women with an unintended or disagreed-upon first birth remain significantly more likely to experience relationship dissolution, by about 74% and 22%, respectively. That is, the association between first birth intendedness and relationship dissolution does not appear to be explained by either subsequent childbearing (or lack thereof) or socioeconomic, demographic, or union characteristics. Further, the association between subsequent fertility and dissolution seen in Model 3 is only attenuated slightly by the inclusion of socioeconomic, demographic, and union variables in Model 4, suggesting higher-parity births have a strong, independent effect on union stability. Further, in models not shown, where we interacted first and second birth intentionality, we found that any combination of fertility and intentionality other than a first intended birth

followed by only subsequent intended births increased the risk of union dissolution. Multiple unintended births, though relatively rare, were particularly detrimental to union stability.

In analyses presented in Table 3, we tested whether birth intentionality affects stability differently in cohabiting versus marital unions, showing Models 2 and 4 (models with controls) presented in Table 2 disaggregated by relationship status at first birth. The first two columns show the results for first births in cohabiting unions (including women who marry after the birth). Focusing on birth intentionality, first birth intentionality increases the odds of dissolution by about a third in Model 2 (without controls for subsequent fertility) but becomes non-significant in the presence of higher-order fertility indicators and socioeconomic, demographic, and relationship variables. Higher-order fertility itself is associated with dissolution, but the magnitude of the association is fairly small. Women who have no second birth are 40% more likely to experience the dissolution of their first birth union relative to women with intended subsequent births, and only unintended subsequent births in the first-birth union increase the likelihood of dissolution by 83%. Relatively few socioeconomic and demographic variables are associated with union stability among women who were cohabiting at their first birth, though women who had not transitioned to marriage have about 25% lower odds of dissolution than women who transitioned to marriage. This is somewhat counterintuitive, but mirrors Manning's (2004) findings that children have little effect on cohabitation stability but a destabilizing effect on couples who transition from cohabitation to marriage.

Looking at Models 2 and 4 for marital unions reveals a different picture. Here, contrary to Hypothesis 3 (where we expected a strong negative association for cohabitations but not marriages), first and higher-order births are quite strongly related to union dissolution, with unintended first and subsequent births independently increasing the likelihood of dissolution. In

Model 2, which includes only first birth intentionality, the odds of marital dissolution are 3.7 times as high after an unintended first birth relative to a intended first birth, with disagreement increasing the odds of dissolution by about 50%. The inclusion of higher-order fertility variables attenuates the magnitude of the first-birth variables somewhat, but they remain large and statistically significant. Even controlling for higher-order births, an unintended first birth increases the likelihood of dissolution threefold. Further, couples who have only unintended subsequent births are 4.9 times as likely to experience dissolution relative to those who only have intended subsequent births. Disagreement on first and higher-parity births increase the odds of dissolution as well, by 39% and 55%, respectively.

– Table 3 here –

Clearly, then, the increased risk of dissolution for unintended and disagreed-upon births seen in Table 2 is largely driven by the effect on marriages. It may be that cohabiting unions are so inherently unstable that fertility (and intentionality) affects stability differently than it does for marriage – recall that in the combined models, relationship type is the strongest predictor of instability by far, with individuals who were cohabiting at first birth far more likely to dissolve than those who were married at first birth. It is also worth noting that some of the findings regarding the demographic and union variables from the combined models are significant only for the married subsample. Foreign-born Hispanics are significantly less likely to experience dissolution, and prior cohabitation and marriage increases the chances of divorce, but these associations are only present for women who were married at their first birth.

Fixed-effects results

Table 4 shows results from fixed-effects analyses of relationship dissolution after intended and unintended births (Model 5). Recall that only time-varying characteristics can be

included in these models, and as a result coefficients are estimated based on changes in the characteristic. The coefficients for our central independent variables, birth intentionality, can be interpreted as the difference in the odds of dissolution in birth intervals following an unintended or disagreed-upon birth relative to intervals following an intended birth, the reference category. All stable characteristics of women and their relationships – including unobserved characteristics as well as variables included in previous models, such as the couple's relationship status at the first birth, whether the first birth was legitimated, whether married couples cohabited before marriage, the age at the start of coresidence, family background, etc. – are accounted for in this model.

-Table 4 here-

Contrary to hypothesis 3, fixed-effects models show a large positive association between unintended fertility and relationship dissolution. The odds of dissolution are 3.42 times higher after an unintended birth than an intended birth, and this association is statistically significant ($p<.001$). The association shown in Models 2 and 4 is not attenuated when accounting for stable characteristics; in fact, the coefficient is larger in the fixed effects specification. The coefficient may be larger because unobserved characteristics not accounted for in Models 2 and 4 suppress the true association. In addition, fixed-effects models estimate subject-specific coefficients, rather than population-averaged coefficients, which tend to be larger in magnitude (Teachman 2011). The association between couple disagreement about birth intentionality and dissolution is also positive, and about the same magnitude as in Model 2 above (OR = 1.26). However, because this coefficient is estimated based only on couples with more than one birth of different intentionalities, this model has less statistical power and the coefficient is not statistically significant ($p=.21$). Overall, Model 5 confirms the basic finding in the models above that

unintended births negatively impact union stability. The association between unintended fertility and relationship dissolution is not purely the result of selection based on stable individual and couple characteristics.

As noted above, this type of analysis can produce biased coefficient estimates for characteristics that vary monotonically with time. For example, couples transition from cohabitation to marriage, but not from marriage to cohabitation, so the coefficient for cohabitation during the month only varies in one direction. The negative coefficient for cohabitation in the model may result from this bias – since couples only transition to marriage if their cohabiting relationship does not dissolve, the odds of dissolution during marriage are necessarily greater for these couples. However, this coefficient is also consistent with the finding from the models for couples cohabiting at the first birth that dissolution rates are higher for those who marry after the birth than those who remain cohabiting.

Discussion

As expected, intendedness of births is associated with union stability. Consistent with prior research and as hypothesized (Hypothesis 1), we found that couples with an unintended first birth are more likely to break up than those with an intended first birth, with those who disagree over birth intendedness falling in the middle. These associations persist even when controlling for individual and couple factors and accounting for subsequent fertility among couples who stayed together long enough to have additional children. Given that parenting is highly stressful and often drastically changes relationship dynamics, entering into parenthood when one or both partners feels as if they were not prepared to do so can have negative implications for the strength of the union and have a lasting impact. Additional unintended births have an even larger negative impact on union stability, compounding the negative impact of

early unintended births in interactive models (not shown). Thus, our results support our contention that unintended fertility has a direct negative effect on the stability of coresidential relationships. The fixed effects models did not support Hypothesis 3, as the models did not attenuate the strong association between unintended births and relationship dissolution found in the event history models, indicating that selection into unintended childbearing does not fully account for the impact of unintended fertility on union instability. Instead, as is well-documented, the transition to parenthood *and* the addition of more children to a partnership disrupts patterns of leisure, communication, and employment and introduce additional demands on social and economic resources. Those couples who intentionally become parents or who intentionally have additional children likely anticipate these changes (to a degree) and postpone childbearing until they feel equipped to handle the challenges; for those whose entry into parenthood is unplanned or for those who family grows unintentionally, these challenges may be far more detrimental to relationship quality, functioning, and stability.

Births to cohabiting parents are more likely to be unintended than births to married couples (Chandra et al. 2005; Finer and Henshaw 2006). However, controlling for this difference in intention status of births does not account for differences in stability between married and cohabiting parents. Consistent with previous research, cohabiting couples with a cohabiting birth have odds of dissolution nearly four times higher than married couples with a birth within marriage. Cohabiting parents who marry after a birth have even higher odds of dissolution. This finding is counterintuitive but has been found in other work (Manning 2004). Selection in to marriage may explain these results: women who marry post-birth may be responding to social pressures rather than a desire to marry, while women who remain cohabiting may be more secure in their union as currently structured. Because this process is based on change in relationship

dynamics after the birth, it is not accounted for by fixed-effects models. The positive associations between past cohabitation and the odds of dissolution in the current relationship are also robust to controls for birth intendedness, suggesting that levels of commitment in unions, especially marriages, differ beyond any contributions to union stability that shared childbearing may add.

Although cohabiting unions appear to be more unstable overall, the negative association between unintended births and relationship stability is far stronger for marriages than for cohabitations. We had expected that the greater levels of commitment and institutional and social support among married couples relative to cohabiting couples would reduce any degree of stress and the disruptive nature of an unintended birth (Hypothesis 2), but this appears not to be the case. Given pronatalist pressures and norms among married couples in the United States and weakened but still negative attitudes toward childlessness (Barber and Axinn 2005; Hagewan and Morgan 2005; McQuillan et al 2008), married couples who have – and label – an unintended birth represent a small and distinct group. Further exploration of these couples is warranted.

Limitations

Due to data limitations, this analysis excludes births to noncoresidential couples. Therefore, our analysis provides only a limited assessment of the relationship between unintended fertility and stability of all types of relationships, as coresidential couples may be better equipped to handle parenthood and have greater commitment to their union than those who do not live together. It is important to note, however, that the majority of unintended births in the United States take place in coresidential unions (Chandra et al. 2005), and thus understanding the impact of unintended births on these relationships is an important component of studying unintended fertility. Further, although couples who have an unintended birth are more likely to dissolve than couples with an intended birth, it is possible that unintended fertility is protective

relative to childlessness. The fact that couples with no subsequent births have an elevated risk of dissolution relative to couples with intended second births would argue against this possibility, but having no shared children at all may be different from having only one child. Additional research comparing parents to childless couples and comparing coresidential and noncoresidential couples is necessary in order to evaluate this possibility. We also recognize that in using births rather than pregnancies (a limitation of survey data, which is known to underestimate pregnancies that end in abortion), our results cannot be generalized to understand the impact of unintended pregnancy. These findings would likely underestimate the negative effect of an unintended pregnancy, as couples who are more committed or feel more optimistic about shared parenthood and their union's future would be more likely to carry an unintended pregnancy to term.

The cross-sectional design of the NSFG also means we do not know women's fertility intentions prior to having children, and as with any work on fertility intentions, there are always concerns about retrospective accuracy. Reports of unintendedness may shift over time as recall error, rationalization, and other factors change. In particular, women may be more likely to characterize a birth in a failed relationship as unintended than a birth in an intact relationship. If this is the case, our results may overstate the impact of unintended fertility on union dissolution. It is notable that we found a persistent (though sometimes attenuated) impact of having an unintended or disagreed-upon first birth even when followed by intended births in models in which we interacted first and second birth intentionality (not shown). Retrospective reclassification of births as unintended based on union demise should apply to births of all parities or perhaps to the most recent birth. The negative association between unintended first births followed by subsequent disagreed-upon or different types of births and dissolution

suggests that our findings are not only driven by reporting issues, as it seems less likely that subsequent relationship dissolution would lead women to classify first births as unintended yet classify higher-parity births in the same relationship as disagreed-upon or report different types of births.

We also lack measures of relationship quality. Relationship quality before a birth predicts both births and birth intentionality and moderates the impact of birth intentionality on post-birth relationship functioning (Lawrence et al. 2008). To some extent, fixed effects models account for the impact of relationship factors such as quality prior to the birth, since early relationship characteristics are unchanging with respect to events after the birth. However, direct changes in relationship quality are not modeled in the fixed-effects approach. For instance, if deterioration in relationship quality increases the risk of both unintended fertility and relationship dissolution, fixed-effects models will overestimate associations in the same way as standard event-history models. More generally, we have limited measures of time-varying characteristics. However, accounting for selection according to stable characteristics still represents an improvement over previous research on the impact of unintended fertility on union dissolution.

We are also limited by our reliance on women's reports of partner agreement, a limitation we share with other work on fertility intentions in couples (e.g., Korenman, Kaestner, and Joyce 2002; Santelli et al. 2009). Women may not accurately report or even know how their partner feels about a particular birth. Finally, our definition of unintended varies from earlier research, which may limit generalizability; however, we also conducted our analyses using the more traditional definition of unintended, and the results were substantively similar. We believe that this measure more accurately reflects how birth intentionality is associated with subsequent behaviors.

Conclusion

Although the consequences of unintended fertility for mothers and children have been studied extensively in the past, evidence on parental relationship consequences is more limited. We extended the prior literature by analyzing both first and higher-parity birth intentionality, disaggregating by union type, and attempting to disentangle causal and selective mechanisms driving the previously observed negative association between first birth intentionality and union dissolution. We demonstrated that unintended fertility at any parity is negatively associated with union stability, and repeated unintended births are even more strongly negatively associated with stability. These associations are stronger if both partners reported the birth was unintended but hold even if only one partner felt that way. This association appears to derive at least in part from a causal relationship – having an unintended or disagreed-upon birth, at any parity, apparently causes disruptions in relationships and reduces union quality in such a way as to increase the risk of dissolution – rather than a selection process of unstable couples having unintended fertility.

Even in the relatively restricted analytic sample here, simplified by the exclusion of non-coresidential first births and women whose partners had children from previous relationships, incorporating multiple births increases the explanatory power of models predicting relationship outcomes. We showed that having a birth in a cohabiting union is detrimental to long-term union stability (even if marriage occurs subsequently) relative to being married at birth, and this is true even when controlling for birth intentionality. At the same time, unintended births are more negatively associated with dissolution for marriage than for cohabitation. These findings point to the complex and interdependent relationship between and among relationship and fertility behaviors. Studies of the association between fertility and union stability should consider intentionality in addition to other fertility characteristics and consider differential fertility effects

across relationship types, including the need to examine non-coresidential unions as well as marriages and cohabitations. Further, the need to understand how fertility influences stability relative to childless couples remains. Finally, we recommend that future work on fertility and associated outcomes incorporate higher-parity births into their models. Births are not isolated events, and most women (and couples) who have one birth go on to have subsequent births; even the decision *not* to have additional children may have implications for union and other outcomes.

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Table 1. Weighted Descriptive Statistics for Women with a Cohabiting or Marital First Birth

	Full	Cohabiting at Birth	Married at Birth
Sociodemographic characteristics			
Race-ethnicity			
Non-Hispanic White	75.5%	54.4%	79.6%
Non-Hispanic Black	5.7%	13.7%	4.1%
Foreign-born Hispanic	7.3%	12.4%	6.3%
Native-born Hispanic	11.5%	19.5%	9.9%
Family structure at age 14			
Both biological parents	77.45	57.1%	81.4%
Stepfamily	8.6%	16.6%	7.0%
Other family type	14.1%	26.3%	11.6%
Mother's education			
Less than HS/missing	28.2%	42.0%	25.5%
HS	40.8%	36.0%	41.8%
Some college	17.7%	13.2%	18.6%
College or more	13.3%	8.8%	14.2%
High school degree at time of birth	77.5%	50.5%	83.1%
Union characteristics			
Past cohabitation	7.4%	15.5%	5.8%
Past marriage	3.3%	0.8%	3.8%
Partner married before	7.4%	12.4%	6.4%
Relationship type at first birth			
Cohabiting	16.6%	-	-
Married, with cohabitation prior to marriage	27.0%	-	32.5%
Married, without cohabiting	56.3%	-	67.5%
Relationship dissolution by end of observation	33.2%	67.1%	26.5%
Average relationship duration prior to first birth	34.1 mos	20.9 mos	36.7 mos
	(30.21)	(23.71)	(30.69)
Fertility characteristics			
Modal year of birth	1992	1991	1994
Average months between first birth & relationship end/survey	97.3 mos	68.8 mos	102.9 mos
	(72.86)	(64.51)	(73.1)
Average age at first birth	24.4 yrs	21.4 yrs	25.0 yrs
	(5.05)	(4.39)	(4.95)
Pre-union conception	21.1%	33.4%	18.6%
First birth intendedness			
Both intended	66.6%	40.3%	71.8%
Both unintended	7.4%	21.9%	4.6%
Disagreement on intendedness	26.0%	37.9%	23.6%
Subsequent fertility by relationship end/time of survey			
No birth	36.9%	49.8%	34.3%
Only intended	43.0%	29.7%	45.6%
Only unintended	2.1%	4.5%	1.7%
Only disagreed-upon	9.7%	10.3%	9.6%
Births with different intentionalities	8.3%	5.8%	8.8%
N	1954	430	1524

Percents may not total 100% due to rounding.

Table 2. Odds Ratios from Logistic Regression of Birth Intendedness on Union Dissolution among Women with a Coresidential (Cohabiting or Marital) First Birth in the 2002 NSFG

	Model 1		Model 2		Model 3		Model 4	
Intentionality								
1st birth intendedness								
Both intended	--		--		--		--	
Both unintended	5.015	***	1.842	***	2.911	***	1.741	***
Disagreement on intendedness	2.186	***	1.292	**	1.570	***	1.224	*
Subsequent fertility (time-varying)								
No birth					1.711	***	1.653	***
Only intended					--		--	
Only unintended					2.769	***	2.409	***
Only disagreed-upon					1.622	***	1.574	***
Births with different intentionalities					1.420	*	1.351	
Months since birth (time-varying)								
0-23 months	1.280	**	1.183		1.154		1.101	
24-48 months	--		--		--		--	
More than 48 months	0.666	***	0.767	**	0.720	***	0.852	
Socioeconomic and demographic characteristics								
Race/ethnicity								
Non-Hispanic White			--				--	
Non-Hispanic Black			1.205				1.163	
Native-born Hispanic			0.976				0.952	
Foreign-born Hispanic			0.730	**			0.711	**
Family structure at age 14								
Both biological parents			--				--	
Stepfamily			1.119				1.097	
Other family type			1.172				1.159	
Mother's education								
Less than HS/missing			1.021				1.010	
HS			--					
Some college			1.172				1.157	
College or more			1.007				0.997	
High school degree (time-varying)			1.058				1.057	
Union and fertility characteristics								
Past cohabitation			1.419	**			1.447	**
Past marriage			1.617	*			1.557	
Partner married before			1.062				1.060	
Relationship type (time-varying)								
Cohabiting at birth, cohabiting now			3.777	***			3.567	***
Cohabiting at birth, married now			4.117	***			4.201	***
Premarital cohabitation, marital birth, married now			1.380	**			1.362	**
No cohabitation, marital birth, married now			--				--	
Relationship duration prior to birth			0.999				0.999	

Age at birth		0.895 ***		0.867 ***
Year of birth		1.018 **		1.017 **
Pre-union conception		1.008		1.003
Constant	0.004 ***	2.3^{e-17}	0.038 ***	7.3^{e-17} ***
N	168891	168891	168891	168891
Women	1954	1954	1954	1954
-2log likelihood	9951.257	9400.783	9727.880	9370.116

*p<.05; ** p<.01; *** p<0.001.

Table 3. Odds Ratios from Logistic Regression of Birth Intendedness on Union Dissolution among Women with a First Birth in the 2002 NSFG, by Union Type at First Birth

	Cohabitation Model 2		Cohabitation Model 4		Marriage Model 2		Marriage Model 4	
Intentionality								
1st birth intendedness								
Both intended	--		--		--		--	
Both unintended	1.344	*	1.308		3.690	***	3.078	***
Disagreement on intendedness	1.100		1.063		1.479	***	1.386	**
Subsequent fertility (time-varying)								
No birth			1.407	*			1.545	**
Only intended			--				--	
Only unintended			1.834	*			4.865	***
Only disagreed-upon			1.401				1.377	
Births with different intentionalities			1.277				1.446	
Months since birth (time-varying)								
0-23 months	1.273		1.245		0.998		0.917	
24-48 months	--		--		--		--	
More than 48 months	0.738	*	0.802		0.757	*	0.846	
Socioeconomic and demographic characteristics								
Race/ethnicity								
Non-Hispanic White	--		--		--		--	
Non-Hispanic Black	1.226		1.202		1.358		1.323	
Native-born Hispanic	1.021		1.008		1.004		0.925	
Foreign-born Hispanic	0.940		0.926		0.469	***	0.427	***
Family structure at age 14								
Both biological parents	--		--		--		--	
Stepfamily	1.177		1.143		1.289		1.257	
Other family type	0.981		0.968		1.378	*	1.324	*
Mother's education								
Less than HS/missing	0.973		0.954		1.045		1.086	
HS	--		--		--		--	
Some college	1.252		1.223		0.973		1.001	
College or more	1.102		1.048		0.882		0.927	
High school degree (time-varying)	1.023		1.021		1.103		1.141	
Union and fertility characteristics								
Past cohabitation	1.029		1.050		1.723	*	1.756	*
Past marriage	0.203		0.207		2.489	***	2.248	***
Partner married before	0.897		0.905		1.060		1.060	
Relationship status, cohabitation (time-varying)								
Cohabiting at birth, cohabiting now	0.781	*	0.746	*				
Cohabiting at birth, married now	--		--					
Relationship status, marriage								
Premarital cohabitation					1.482	***	1.483	***
No premarital cohabitation					--		--	

Relationship duration prior to birth	0.996		0.996		1.002		1.001	
Age at birth	0.947	***	0.947	***	0.876	***	0.874	***
Year of birth	1.069	***	1.067	***	0.968	**	0.970	**
Pre-union conception	0.870		0.881		0.917		0.879	
Constant	1.6^{e-59}	***	6.0^{e-58}	***	2.5^{e+26}	**	8.5^{e+24}	**
N	27224		27224		141667		141667	
Women	430		430		1524		1524	
-2log likelihood	4314.160		4307.528		5067.455		4895.065	

*p<.05; ** p<.01; *** p<0.001.

Table 4: Odds Ratios from Fixed-Effects Regression of Intendedness of Most Recent Birth on Union Dissolution among Women with a Coresidential First Birth in the NSFG

		Model 5	
Demographic and relationship characteristics			
High school degree		4.69	*
Relationship type			
	Cohabiting	0.004	***
	Married	--	
Relationship duration at most recent birth		1.03	***
Fertility characteristics			
Months since birth			
	0-23 months	0.28	***
	24-48 months	--	
	More than 48 months	3.42	***
Parity			
	First birth	0.49	**
	Higher order birth	--	
Intendedness of most recent birth			
	Both intended	--	
	Both unintended	3.52	***
	Disagreement on intendedness	1.38	
Person-months		**49054**	
Women		**767**	
-2log likelihood		**5306**	

*p<.05 ** p<.01 *** p<.001. All covariates are time varying.